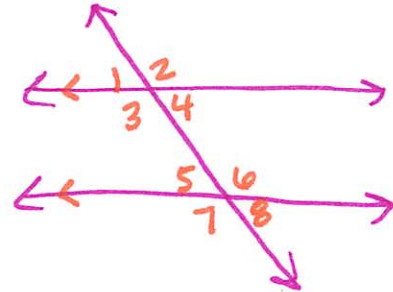


Name: _____ TP: _____

With 2 parallel lines and a transversal:

① Congruent

- Alternate Interior $\angle 3, \angle 6$ (Also... vertical $\angle 2, \angle 3$)
- Alternate exterior $\angle 2, \angle 7$
- Corresponding $\angle 4, \angle 8$

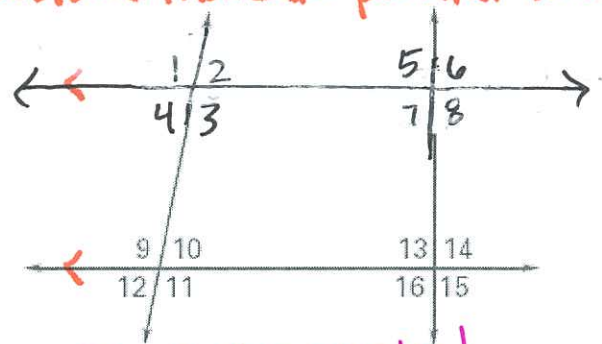


② Supplementary

- Consecutive Interior $\angle 3, \angle 5$ (Also... linear pair $\angle 2, \angle 4$)

State the relationship between the two angles. *Orange arrows indicate parallel lines.*
*See examples above.

- $\angle 3$ and $\angle 9$ _____
- $\angle 5$ and $\angle 13$ _____
- $\angle 4$ and $\angle 10$ _____
- $\angle 5$ and $\angle 15$ _____
- $\angle 7$ and $\angle 14$ _____
- $\angle 1$ and $\angle 11$ _____



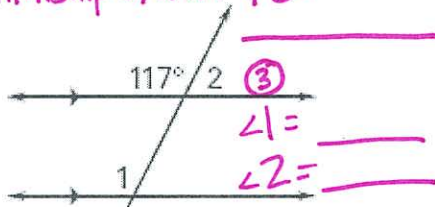
*LOOK at the angles!

- If both are obtuse, or both are acute, they are \cong if one of the relationships
- If one is obtuse & acute, they are supplementary.

FILL IN ALL BLANKS OR I ASKLE.

7. Find $m\angle 1$ and $m\angle 2$.

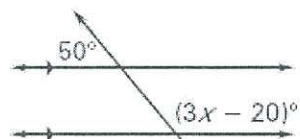
① Relationship b/w 117° & $\angle 2$:



$\angle 1 =$ _____
 $\angle 2 =$ _____

② Relationship b/w 117° & $\angle 1$:

10. What is the value of x ?

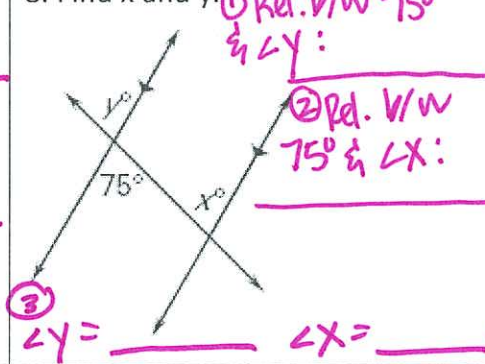


- A. 40
B. 50
C. 60
D. 70

① Rel b/w 50° & $3x - 20^\circ$

② $x =$ (set up equation!)
 $50 + 3x - 20 =$ _____

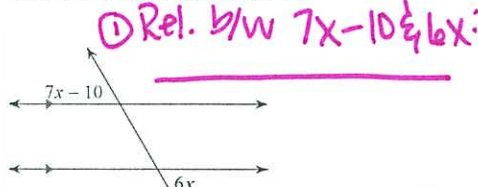
8. Find x and y .



① Rel. b/w 75° & $\angle y$:

② Rel. b/w 75° & $\angle x$:

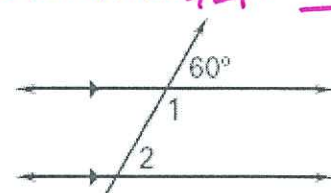
11. Find the value of x .



② $x =$ (set up equation!)

9. Find $m\angle 1$ and $m\angle 2$.

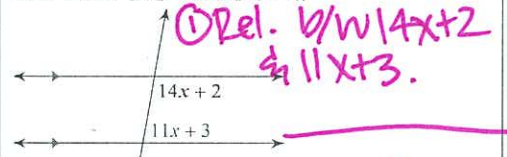
① Rel b/w 60° & $\angle 1$:



② Rel. b/w 60° & $\angle 2$:

③ $\angle 1 =$ _____ $\angle 2 =$ _____

12. Find the value of x .



① Rel. b/w $14x + 2$ & $11x + 3$.

② $x =$ (set up eqn!)

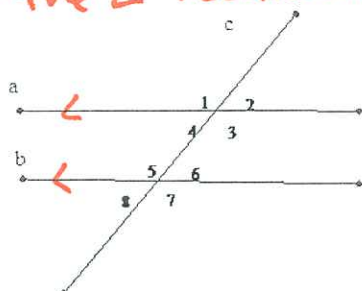
STAY READY...

13. If lines a and b in the figure below are parallel, and intersected by the transversal, c , which of the following statements must be true?

• Check each response. If it's false, cross it out.
• Look at the \angle relationships on page 1.

- I. $m\angle 1 = m\angle 7$
- II. $m\angle 2 = m\angle 8$
- III. $m\angle 4 + m\angle 5 = 180$

- A. I only
- B. III only
- C. I and II only
- D. I, II, and III
- E. None of the above



Justify your response.

Two angles form a linear pair. The measure of one angle is six more than twice the measure of the other angle. Find the measure of each angle.

GOAL Find the...

REQUIRED • Linear pair
→ what is a linear pair?

- one angle: _____
- one angle: $= x$

ANALYSIS

I will draw _____. To find each angle, I must set up an _____.

SOLVE

$$\angle 1 + \angle 2 = \boxed{?}$$

→ substitute from picture
→ SOLVE!

(linear pair)
6 more than twice other angle
what operation? what operation?
write expression: _____

$$\angle 1 = \underline{\hspace{2cm}} \quad \angle 2 = \underline{\hspace{2cm}}$$

PARAPHRASE PROVE IT! SHOW that both angles create a linear pair.

STAY READY...